#### **REMARKS**

Claims 1-12 were examined. All claims were rejected. In response to the above-identified Office Action, Applicants amend claims 1, 8 and 12, but do not cancel any claims or add any new claims. The amendments are supported by the Specification at p. 3, 1. 20 through p. 4, 7; p. 6, ll. 11-12; and p. 12, ll. 22-23. Reconsideration of the rejected claims in light of the aforementioned amendments and the following remarks is requested.

### I. Claims Rejected Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 1, 7, 8 and 10-12 under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter Applicants regard as their invention. The phrase at issue, "grammar neutral document objects," refers to an intermediate product of the document generation system. Applicants explain that grammar neutral document objects are accumulated from document components from a document component library under the control of document generation rules designated by a user of the system (see, e.g., Specification, p. 4, ll. 8-14). These grammar neutral document objects are suitable for processing in a program of a computer system, and can also be converted into grammar-connected documents in a string form. The grammar-connected documents are an end product of a basic embodiment of the invention.

Grammar neutral document objects are different from the Examiner's interpretation of "ordinary objects used in documents such as text," at least because text is not usually suitable for processing in a program of a computer system. The Specification is clear that the "processing" intended involves the computer being able to distinguish different types of data (and to determine that other data are of similar or interoperable types). For example, an "address" grammar neutral document object is described at p. 3, l. 23 through p. 4, l. 7.

Such document objects carry information that permits the computer to recognize and manipulate an address in ways that make sense for an address, but do not make sense for other types of objects.

Furthermore, if grammar neutral document objects were "ordinary objects ... such as text," then there would be no need to convert them into grammar-connected documents that are in a human-readable string form, as a later claim element recites.

Applicants' amendments to claims 1 and 8 are believed to express these concepts with greater particularity. For example, the addition of the word "semantic" to "program processing" indicates that the processing occurs on the basis of the *meaning* of a grammar neutral document object, and not simply the letters or words of a text string. Also, the addition of "human-readable" to "string" in a subsequent element provides further distinction to the grammar-connected document; it is not (as the Examiner supposes) an XML document, but rather an ordinary text document that a human could read and understand without difficulty. (It is true that XML is a text-based language that can be printed out and deciphered by a person, but it is not designed to be used in that way, and natural-language words appearing in an XML document are chosen for the convenience of a developer – they convey no additional information to the XML document's intended "reader," a computer program.)

For at least the foregoing reasons, Applicants respectfully request that the Examiner withdraw the rejections of claims 1, 7, 8 and 10-12 under 35 U.S.C. § 112.

# II. Claims Rejected Under 35 U.S.C. § 101

The Examiner rejected claims 1-8 and 12 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

The Examiner asserts that claim 1 and its dependent claims 2-7 "appear to be claiming 'software systems." (Applicants note that the Examiner included

independent claim 8, which recites a method, in this rejection. This inclusion seems to be inadvertent; it is believed that methods are generally statutory subject matter.) Claims 1-7 are explicitly drawn to an *automatic document generation system* comprising a number of functional elements, which are named and identified in terms of their functionality. For example, one element is a document generation rule formulator; another is a document component library. These elements could be implemented by software, but this is not the only possible implementation. A software implementation of the invention is recited in claim 12, but claims 1-7 refer to any system with the specified elements, while claim 8 refers to a related method. Applicants respectfully request that these rejections be withdrawn.

Claim 12 has been amended to explicitly recite that the "recording media storing an e-business document generation method" is actually a *computer-readable* recording media storing *instructions to cause a programmable processor to perform* an e-business document generation method. Such media are statutory subject matter (*see In re Beauregard*, 35 USPQ.2d 1383: "computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. 101"). Applicants respectfully request that this rejection be withdrawn.

## III. Claims Rejected Under 35 U.S.C. § 103(a)

The Examiner rejected claims 1-12 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,065,026 issued to Cornelia *et al*. ("Cornelia") in view of Special Edition Using Microsoft Word 97, published December 15, 1996, pp. 1-15, by Person *et al*. ("Person") and further in view of aTool – Creating Validated XML Documents on the Fly Using MS Word, published October 20, 2002, pp. 113-121, by Meyer ("Meyer"). In light of Applicants' amendments presented herewith, the claims now pending are believed to contain material neither taught nor suggested by the references.

Claim 1 recites an automatic document generation system in an e-business environment comprising a number of functional elements that cooperate to produce a grammar-connected document in a human-readable string form for use in an actual business. The grammar-connected document is prepared by a document grammar connector from grammar neutral document objects, which are suitable for semantic program processing in a computer system. *Cornelia* lacks at least the intermediate grammar neutral document objects. The document components in *Cornelia* are simply units of text that are shared among documents (*see Cornelia*, col. 2, ll. 47-49). All the "processing" based on the semantic meaning of the document components is performed by the system's users: they decide whether a particular mutual fund prospectus must include a particular paragraph or section, and the system merely ensures that *the same paragraph or section* is used in each document that has been determined to require it.

Cornelia's functionality is more like the "fill-in-the-blank" operation of a word processor template, as the Examiner recognized by providing the *Person* supplemental reference. Neither *Cornelia* nor *Person* include a document generation rule processor to generate a grammar neutral document object from document components received from a document library, because the material to fill in the blanks is not suitable for semantic program processing in a computer system.

Regarding the second supplemental reference, *Meyer*, the validated XML document is different from a grammar-connected document that is in a human-readable string form for use in an actual business, at least for the reasons discussed above.

Thus, even assuming that the references may properly be combined, Applicants believe that they fail to teach or suggest every element of claim 1, and request that the Examiner withdraw this rejection. Furthermore, claims 2-7 depend directly or indirectly on claim 1, and are patenable for at least the

reasons discussed in support of that base claim. Applicants respectfully request that these rejections be withdrawn as well.

Claim 8 (and its dependent claims) recite a method that has several similarities to the operations of the system of claims 1-7. In particular, claim 8 recites converting grammar neutral document objects, which are suitable for semantic processing in a program of a computer system, into grammar-connected documents in a human-readable string form used in an actual business. As discussed above, none of *Cornelia* and the supplemental references operate in this way. *Cornelia*'s document components are already in human-readable string form, and consequently are neither suitable for semantic processing, nor in need of any sort of conversion to produce a grammar-connected document in a human-readable string form. Therefore, Applicants respectfully request that the Examiner withdraw the rejections of claims 8-11.

Regarding claim 12, that claim recites a computer-readable medium containing a program to perform a document generation method, where the method includes an operation like that discussed in reference to claim 8. For the same reasons, the rejection of claim 12 should also be withdrawn.

## **CONCLUSION**

In view of the foregoing, it is believed that all claims now pending, namely claims 1-12, patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800.

Respectfully submitted,
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